



LOW-COST WIDEBAND ANTENNA ARRAY TECHNOLOGIES

The RADAR Division of the Naval Research Laboratory (NRL) is interested in research which will help reduce the cost of ultra-wide bandwidth multi-functional phased array antennas for communication and radar systems. To this end, NRL welcomes proposals that address the following areas:

- 1) New element design concepts, array architectures, feed components and construction processes that make it more affordable to manufacture large array apertures by a factor of 5 or more.
- 2) Techniques that reduce the number of radiating elements and/or feeding components while maintaining ultra-wide bandwidth, i.e. thinning, interleaving, or element scaling techniques.
- 3) Low-profile ultra-wide bandwidth array designs. This could include abstracted element types or apertures that are on the order of one-half a wavelength thick at the highest frequency of operation and/or can be printed on a single layer such as a thin substrate or potentially the (curved) surface of vehicle.

Proposals should address the value added by contrasting the proposed approach with conventional techniques and technology. This may be done by direct comparison or by a parametric analysis of sufficient depth to assess the benefits of the proposed approach.

Address White Papers (WP) to Code 5314 via [email](#) or fax (202) 767-6276. If confirmation of receipt is desired, please allow one month of processing time before requesting. Substantive contact should not take place prior to evaluation of a WP by NRL. If necessary, NRL will initiate substantive contact.